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Claims

1. A method of producing a target protein, which method comprises expressing said protein in a host
5 cell which contains a nucleic acid molecule which encodes a chimeric protein, said chimeric protein comprising a signal peptide from a non-mammalian bulk-secreted protein and said target protein.
- 10 2. The method of claim 1 wherein said host cell is a eukaryotic cell.
3. The method of claim 2 wherein the host cell is a mammalian cell.
- 15 4. The method of any one of claims 1 to 3 wherein said signal peptide has at least 8 amino acids.
5. The method of claim 4 wherein said signal peptide
20 has at least 10 amino acids.
6. The method of claim 5 wherein said signal peptide has at least 12 amino acids.
- 25 7. The method of any preceding claim wherein the chimeric protein does not incorporate the majority of the native protein of the signal peptide.
8. The method of claim 7 wherein the chimeric protein
30 incorporates less than 15 amino acid residues of the native protein of the signal peptide.
9. The method of claim 8 wherein said chimeric
35 protein does not incorporate the native protein of the signal peptide.

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10. The method of any preceding claim wherein the signal peptide is from a copepod or ostracod bulk-secreted protein.

5 11. The method of claim 10 wherein the signal peptide is from a *Guassia princeps* or a *Vargula hilgendorffii* bulk-secreted protein.

10 12. The method of claim 11 the signal peptide is from *Guassia princeps* or *Vargula hilgendorffii* luciferase.

13. The method of claim 12 the signal peptide has a sequence selected from SEQ ID No.1 or SEQ ID No.2 or fragments or derivatives thereof.

15 14. The method of any preceding claim wherein the signal peptide comprises the amino acid sequence ALICIA or a variant or fragment thereof.

20 15. The method of any preceding claim wherein the target protein is not naturally secreted.

16. A nucleic acid molecule as defined in any preceding claim.

25 17. The nucleic acid of claim 16 which comprises a nucleotide sequence selected from nucleotide sequences encoding SEQ ID No. 1 or SEQ ID No. 2 or variants or fragments thereof or sequences complementary and/or
30 capable of hybridising thereto under conditions of high stringency.

18. The nucleic acid of claim 17 which comprises a nucleotide sequence selected from SEQ ID No. 3 or SEQ
35 ID No. 4 or variants or fragments thereof or sequences complementary and/or capable of hybridising thereto under conditions of high stringency.

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19. A chimeric protein molecule encoded by the nucleic acid molecule of any one of claims 16 to 18.

5 20. A vector comprising the nucleotide sequence of a signal peptide from a non-mammalian bulk-secreted protein upstream from a cloning site in which the coding sequence of a target protein can be inserted resulting in an expression product of said vector
10 which is a chimeric protein, said chimeric protein comprising a signal peptide from a non-mammalian bulk-secreted protein and said target protein.

15 21. The vector of claim 20 wherein the cloning site is suitable for seamless cloning.

22. A host cell containing the nucleic acid or vector of any one of claims 16 to 21.

20 23. The host cell of claim 22 wherein the host cell is mammalian.

24. The host cell of claims 22 or 23 wherein the host cell is part of a stable cell culture.

25 25. A method for obtaining a target protein from the media of a host cell culture comprising the host cell of any one of claims 22 to 24, which method comprises expressing protein from said host cells, harvesting
30 the culture media of said cells and extracting and purifying said target protein therefrom.

26. A kit comprising the vector of any one of claims 20 or 21 and a host cell.

35 27. A method of producing a target protein, which method comprises expressing said protein in a host

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cell which contains a nucleic acid molecule which encodes a chimeric protein, said chimeric protein comprising a signal peptide from a bulk-secreted protein and said target protein, wherein said signal peptide is from a biological source taxonomically distinct from the host cell and wherein the chimeric protein does not include more than 15 residues of the signal peptide's native protein.

10 28. The method of claim 27 wherein the signal peptide is selected from *Guassia princeps* or *Vargula hilgendorffii* luciferase.

15 29. The method of claims 27 or 28 wherein the host cell is a mammalian cell.